ANNUAL FORM No. 62.

Forest Department, Bombay, Southern Circle.

Financial results of the year 1888-89.

Division.	Timber and other produce removed from the Forests by Government agency.		Other Revenue.		Formation, protection and improvement of Forests.	Total.	
	Receipts.	Charges.	Receipts.	Charges.	Charges.	Receipts.	Charges.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Direction	...	...	307	24,096	...	307	24,096
Northern Division of Kánara	3,20,170	1,50,938	88,954	3,171	74,513	4,09,124	2,28,622
Central Division of do. ...	1,51,786	88,422	60,864	7,148	10,793	2,12,650	1,06,363
Southern Division of do. ...	59,122	29,602	40,334	15,560	11,656	99,456	56,818
Belgaum	2,41,145	1,10,387	42,919	10,479	9,855	2,84,064	1,30,721
Dhárwár	85,557	34,749	27,202	9,267	3,425	1,12,759	47,441
Bijápur	1	...	27,688	5,082	15,258	27,689	20,340
Kolába	10,972	23,031	1,04,483	12,364	12,287	1,15,455	47,682
Ratnágiri	10,387	7,439	1,662	413	5,665	12,049	13,517
Total ...	8,79,140	4,44,568	3,94,413	87,580	1,43,452	12,73,553	6,75,600

J. L. L. MacGREGOR,
Conservator of Forests, Southern Circle.

Conservator's Office, Southern Circle,
Dated Belgaum, 16th November 1889.

No. 105 of 1890.

REVENUE DEPARTMENT.

Kánara Districts,
Camp Kárwár, 15th January 1890.

MEMORANDUM.

The accompanying report on the forest administration of the Southern Circle for the year 1888-89 is submitted to Government with the following remarks.

2. Paragraph 4.—Government orders have been issued on the Forest Settlement Report of 21 villages of the Honávar Táluka (*vide* Government Resolution No. 8772, dated 19th November 1889.

3 Paragraph 9.—The issue of Government orders on the Forest Settlement Reports of Pen, Nágothna, &c., apparently awaits the settlement of the question of dálhi cultivation. It is most desirable that these reports should be disposed of as early as possible.

4. Paragraph 10.—The reports on the Bijápur settlements were necessarily, and with the approval of Government, returned for further consideration, in connection with the Divisional Forest Officer's proposals respecting "fuel and fodder reserves." The latter, which had been in no way checked, amounted to proposals for the inclusion in forest of much larger areas than was contemplated in the Forest Settlement Officer's reports. No maps were, in most cases, forthcoming, and lands in inám villages, as well as inám lands in Government villages, were embraced in the Divisional Forest Officer's scheme. It was, in the circumstances, impossible to approve, or even to form an opinion on the Settlement Officer's reports.

5. Paragraph 17.—A special officer has been appointed to complete the forest settlement work in the Belgaum and Dhárwár Districts (*vide* Government Resolution No. 6066, dated 17th August 1889).

6. Paragraphs 32 to 40.—It is satisfactory to note that while the number of prosecutions increased, the percentage of unsuccessful cases has fallen. In the undersigned's opinion some explanation should have been forthcoming of the decrease in cases compounded in the Bijápur District from 310 to 89. In all other districts, except North Kánara, there was an increase, and only 14 cases were taken into Court in Bijápur.

7. Paragraphs 41 to 54.—The orders passed by Government in Government Resolution No. 1942, dated 24th March 1888, are practically inoperative in a large portion of the Southern Circle, owing to the smallness of the free grazing area. It seems desirable to introduce some analogous penalty, and the Acting Commissioner recommends that the suggestion offered by the Conservator last year—to levy double grazing fees during the following season, when the incendiaries are not detected—be tried as an experiment in the forests of Kánara, Dhárwár and Belgaum. If the villagers generally are to blame for the actual fires, it is more than probable that they could largely assist in detecting the offenders.

8. Paragraphs 55 to 58.—The extension of the successful measures adopted in Belgaum for the collection of grazing fees to Kánara and Dhárwár is likely to lead to further growth of revenue from that source.

9. Paragraphs 59 to 65.—The orders contained in Government Resolution No. 6487, dated 3rd September 1889, will remove any substantial ground of complaint arising from the grazing of sheep and goats in forests. The Acting Commissioner is under the impression that it has, since the close of the year, been prohibited in Belgaum as well as in Bijápur.

10. Paragraphs 66 to 73.—No very marked progress seems to have been made in the important branch of Artificial Regeneration, but the Conservator's orders, as detailed in paragraph 72, seem likely to lead to very useful results.

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11. Paragraphs 85 to 96.—There was a large falling off in the demand for teak prices for sleepers and for running fuel for the Southern Marátha Railway Company.

12. Paragraphs 106 to 118.—There is a decrease in both revenue and expenditure, in the former, mainly owing to the causes mentioned in paragraph 11. The Conservator has called for an explanation of the excess over last year (Rs. 63,052) in amount of outstandings.

13. Paragraphs 119 to 120.—The main want seems to be increased facilities for transport. To provide these, the Conservator advocates the construction of a light railway or tramway from Nágargáli or from Haliyál, or Alnáwar to Pótóli, a distance of 21 or 28 miles according to the route adopted, and of about 10 miles of tram for supply of fuel to the Southern Marátha Railway. The former of these two proposals is already under the consideration of Government, and the latter has been referred to the Railway Company, with a view to ascertaining whether they are prepared to take the work in hand themselves.

G. F. M. GRANT,
Acting Commissioner, S. D.

No. 4422 of 1889-90.

From

The CONSERVATOR of FORESTS,
Southern Circle;

To

The CHIEF SECRETARY to GOVERNMENT,
Revenue Department,
Bombay.

Yellápur, Kánára Districts,
28th January 1890.

Sir,

I have the honour to furnish the report called for in Government Resolution No. 8144 of 26th October 1889, regarding the state of reproduction in the Southern Circle.

I.—Moist-zone, rainfall 40—300 inches, comprising all Kánara, Kolába, West Dhárwár and Western Belgaum.

2. Excepting in the evergreen jungles of the Ghâts, reproduction *by seed* is poor throughout the Circle. I attribute the badness of the reproduction principally to fires, and in a less degree to grazing and damage done to young growth by graziers and others. During the rains great numbers of seedlings come up which are killed by fires. Large quantities are also eaten by cattle which feed on nothing but young shoots and leaves during the hot weather when no grass is fit to eat. On the crest and slopes of the Ghâts, where the jungles have been much kumried, there are large expanses of forest-land which are either quite bare or covered with *karwe* or scrub. These lands have so deteriorated, or the grass or scrub is so dense, that, even if fires could be excluded and grazing stopped, it would in all probability be impossible that they should become re-clothed with trees, or that seedlings could be got to grow, for many decades. The complete failure of numerous attempts to re-stock even freshly-made kumri-lands shows how difficult it is to re-clothe the slopes of the Western Ghâts after they have been cleared by fire. Kumriválás have generally chosen the highest and steepest slopes of the hills for cultivation. The steepest slopes are best adapted for their purpose because weeds are least troublesome on steep ground, but the consequence is almost absolute barrenness. In former times, when forests were not considered of any importance, men were encouraged to kumri anywhere on the Ghâts. Kumri has not been stamped out yet by any means, but its spread has been considerably retarded.

3. In the evergreen forests, which are most extensive on the western slopes of the Ghâts, fire cannot penetrate (owing to the density of the jungle) and the grazing is extremely bad, there being no grass and few edible leaves. The natural consequence is excellent reproduction from self-sown seed. It is impossible to give the area of these evergreen tracts which are scattered and have not been separately demarcated. I dare say there may be some 400 square miles of evergreen or semi-evergreen forest in the Circle, but this is a mere guess.

4. The rest of the forest-area has been traversed by fire for years and years, and it is only quite recently that any attempts have been made to cope with fires. It appears probable from an investigation of the growth of numerous trees which have been cut down and examined during the last two years, that fires have regularly overrun the deciduous forests of Kánara for about 100 years, but that before that period they did not occur, or only at such wide intervals as not to affect to an appreciable extent the growth and reproduction of the forest.

5. All beginnings are difficult, and our first attempts to stop fires in the face of immemorial custom and prejudice have assuredly been no easy task, although they cannot be said to have completely failed. If the reports of areas actually protected could be relied on, I think the officers of the Circle might be fairly

congratulated on the comparative success of the undertaking. A year or two hence, it will be possible to say positively what the result of these protective measures is likely to be, but, as yet it seems to me too early to say if they have materially assisted natural reproduction. Last season was the first in which attempts were made to protect large areas.

6. It is needless to say that hitherto natural reproduction by seed has been extremely bad in the fire-traversed areas, and Messrs. Bell and Oliver, who have minutely examined the area (117,414 acres) to be tapped by the proposed railway from Nágargali to Gund, report that the whole is quite devoid of seedlings.

7. The system which prevails of girdling timber-trees also prevents reproduction from stools, so that the most valuable trees must gradually disappear unless fires can be kept out.

8. Of artificial reproduction by means of planting and sowing little need be said. Seed was sown broad-cast in suitable places last season for the first time, and the regular plantations were protected from fire as usual. On the whole, the regular plantations even in this moist region are not very flourishing, excepting the casuarina-plantations on the shore which can scarcely be considered results of *reproduction*. The teak-plantations about Barchi, Kadra, Singatgeri and Bomanhalli are growing fairly well, but the mistake has been made of not mixing them with other species.

9. I have little doubt that any money available for regeneration can be most advantageously employed in protecting the forest from fire, in sowing seeds broad-cast in suitable places, and in putting down seedlings taken from other parts of the forest in places where timber-trees have been cut out of the forest in jardinage. The planting-up of bare wastes is a very uncertain and very expensive process, as the young plants have to be watered for a couple of years and the ground weeded; even with all this care, they never succeed as well as the self-sown seedling which grows up under the partial cover of the forest and in an environment exactly suited to its own nature. If protection from fire and cattle be afforded, the grassy open wastes which have not become utterly barren will gradually become covered with trees by the surrounding forest pushing its way further and further into the open, but to attempt the direct reboisement of denuded areas before the forest-clad area has been improved and properly stocked does not appear to me expedient.

II.—Dry-zone, rainfall 15—40 inches, including East Belgaum, East Dhárwár and Bijápur.

10. The forest-lands in these districts are either quite bare or covered with more or less thorny coppice and scrub. Reproduction from coppice-shoots is generally good in spite of fires which traverse the whole area every year, excepting an insignificant area which has been protected from fire. These small forests naturally consist chiefly of coppice as, owing to fires, seedlings cannot come up except under the most favourable conditions. Nevertheless, it has been found, even in the extremely dry district of Bijápur, that where there is a little cover, seedlings of *nim* and bamboos can be successfully raised without watering by protecting the jungle from fire and cattle. This has been done on a small scale in the Bádámi and Bágalkot Tálukas, and arrangements are being made to close a fair proportion of the whole area for regeneration. The regular plantations in this zone are very expensive and are certainly not looking well. Here, as elsewhere in the Circle, I propose to stop attempting regular plantations, which at best are a mere drop in the ocean, and to devote all money available for regeneration to the carrying-out of measures to protect the forests from fire and grazing and to the broad-cast sowing of seeds, or the planting of seedlings which do not require expensive nurseries, nor watering. We will, in this manner, be able to deal with comparatively large areas commensurate with the area of the whole forest. Practically, reproduction by seed in the whole of this zone is *nil*, the few selected patches of jungle in which reproduction of this nature can be shown being insignificant as compared with the whole.

III.

11. In the above account I have referred as much to the measures now being introduced to promote natural reproduction by seed, as to the actual state of reproduction, because Government might otherwise think that we are not paying sufficient attention to this all-important matter. The state of the forests in regard to reproduction by seed is, I admit, unsatisfactory: but it must be remembered that no attempts were ever made to protect the jungles from either fire or cattle previously to 1887-88; that the first season's work was very limited; that the executive and protective staff has much to learn in the matter of fire-protection; that the closing to grazing of portions of forests is a work which requires the marking-off and careful selection of such areas, and is, consequently, a slow process.

I have, &c.,

(Signed) J. L. L. MacGREGOR,

Conservator of Forests, Southern Circle.

SIND CIRCLE.

No. 828 of 1889-90.

From

THE CONSERVATOR OF FORESTS, SIND CIRCLE,

To

THE SECRETARY TO GOVERNMENT,
REVENUE DEPARTMENT.

Conservator's Office,

Hyderabad, 10*th September* 1889.

Sir,

I have the honor to forward herewith the Forest Administration Report of the Sind Circle for the year 1888-89 with its subsidiary statements.

I have the honor to be,

Sir,

Your most obedient Servant,

J. G. McRAE, Colonel,
Conservator of Forests, Sind Circle.

(Through the Commissioner in Sind.)

ANNUAL ADMINISTRATION REPORT OF THE SIND FOREST DEPARTMENT FOR THE YEAR 1888-89.

Introduction.

An area of 49,471 acres was added to the Sind Circle during the year under report.

2. The regular demarcation of forests in Sind may be said to have been completed, and no expenditure was incurred during the year under the head of Forest Demarcation and Settlement.